

CLAIMS

What is claimed is:

1. A gastroplasty device, comprising:
 - a first acquisition member and a second acquisition member in apposition to one another along a first longitudinal axis, wherein at least one of the acquisition members is adapted to adhere tissue thereto such that the tissue is positioned between the first and second acquisition members, and
wherein at least one of the acquisition members is movable relative to the first longitudinal axis between a delivery configuration and a deployment configuration.
2. The gastroplasty device of claim 1 further comprising an elongate body attachable to the acquisition apparatus.
3. The gastroplasty device of claim 2 wherein a longitudinal axis defined by the elongate body is parallel with a longitudinal axis defined by the apparatus.
4. The gastroplasty device of claim 1 wherein each of the first and second acquisition members is adapted to adhere tissue thereto.
5. The gastroplasty device of claim 1 further comprising a septum removably positioned between the first and second acquisition members.
6. The gastroplasty device of claim 5 wherein each of the first and second acquisition members is movable relative to the septum between the delivery configuration and deployment configuration.
7. The gastroplasty device of claim 5 wherein each of the first and second acquisition members is pivotally movable relative to the septum.

8. The gastroplasty device of claim 5 wherein each of the first and second acquisition members is movable in a radial direction from one another relative to the septum.
9. The gastroplasty device of claim 5 wherein the first and second acquisition members are movable simultaneously.
10. The gastroplasty device of claim 5 wherein the first and second acquisition members are movable sequentially.
11. The gastroplasty device of claim 5 wherein the first and second acquisition members are movable independently of one another.
12. The gastroplasty device of claim 5 wherein the septum comprises a first barrier extending longitudinally between the first and second acquisition members.
13. The gastroplasty device of claim 12 wherein the septum comprises a second barrier transverse to the first barrier such that the second barrier is in apposition to the first and second acquisition members.
14. The gastroplasty device of claim 13 wherein the second barrier is planar.
15. The gastroplasty device of claim 13 wherein the second barrier is curved about each of the first and second acquisition members.
16. The gastroplasty device of claim 13 wherein the second barrier extends in apposition along a portion of the first acquisition member and in apposition along a portion of the second acquisition member.
17. The gastroplasty device of claim 13 wherein the second barrier is adjustable in height relative to the first barrier.
18. The gastroplasty device of claim 13 wherein the second barrier is adjustably extendable from the first barrier.

19. The gastroplasty device of claim 13 wherein the first and second barriers are collapsible between a delivery configuration and a deployed configuration.
20. The gastroplasty device of claim 5 wherein the at least one acquisition member is pivotally movable relative to the septum.
21. The gastroplasty device of claim 5 wherein the at least one acquisition member is movable in a radial direction relative to the septum.
22. The gastroplasty device of claim 5 wherein a proximal portion of the septum is tapered.
23. The gastroplasty device of claim 5 wherein the septum comprises a ribbed surface such that the septum is configurable from an expanded configuration to a collapsed configuration.
24. The gastroplasty device of claim 5 wherein the septum comprises a bioabsorbable material.
25. The gastroplasty device of claim 24 wherein the bioabsorbable material is selected from a group consisting of polylactic acid (PLA), poly(lactic-co-glycolic acid) (PLGA), and polyglycolic acid (PGA).
26. The gastroplasty device of claim 5 wherein the septum is configured to be left at the deployment site.
27. The tissue acquisition apparatus of claim 1 wherein at least one of the acquisition members has a curved outer surface.
28. The tissue acquisition apparatus of claim 1 wherein at least one of the acquisition members defines an atraumatic tip at a distal end thereof.
29. The tissue acquisition apparatus of claim 1 wherein the first acquisition member comprises a cartridge assembly containing at least one fastener therein for affixing to the tissue.

30. The tissue acquisition apparatus of claim 29 wherein the cartridge assembly is straight along the first acquisition member.
31. The tissue acquisition apparatus of claim 29 wherein the cartridge assembly is curved along the first acquisition member.
32. The tissue acquisition apparatus of claim 29 wherein the second acquisition member comprises an anvil assembly.
33. The tissue acquisition apparatus of claim 1 further comprising a vacuum pump in fluid communication with at least one of the acquisition members.
34. The tissue acquisition apparatus of claim 1 wherein the first and second acquisition members each define at least one opening therein which is in fluid communication with a proximal end of the apparatus.
35. The tissue acquisition apparatus of claim 34 wherein the first and second acquisition members are adapted to pivot towards one another depending upon a vacuum force applied through the at least one opening.
36. The tissue acquisition apparatus of claim 1 wherein at least one of the acquisition members comprises serrations along the acquisition member.
37. The tissue acquisition apparatus of claim 1 wherein at least one of the acquisition members comprises elongate fastening members adapted to be passed through the adhered tissue.
38. The tissue acquisition apparatus of claim 1 further comprising at least one rotatable member contained within the at least one acquisition member, wherein the rotatable member has an outer surface defining serrations thereon for grasping the tissue within the acquisition member when rotated about a longitudinal axis.
39. The tissue acquisition apparatus of claim 1 further comprising a pull-cable attached to the first and second acquisition members for actuating the apparatus between the delivery and deployment configurations.

40. The tissue acquisition apparatus of claim 1 further comprising a torque-rod coupled to the first and second acquisition members for actuating the apparatus between the delivery and deployment configurations.
41. The tissue acquisition apparatus of claim 1 wherein the first and second acquisition members are hydraulically actuated between the delivery configuration and the deployment configuration.
42. The tissue acquisition apparatus of claim 1 wherein the first and second acquisition members are pneumatically actuated between the delivery configuration and the deployment configuration.
43. The tissue acquisition apparatus of claim 1 wherein the first and second acquisition members are comprised of a plurality of articulatable links.

44. A method of acquiring tissue from within a hollow body organ, comprising:

positioning a first acquisition member and a second acquisition member adjacent to a region of tissue within the hollow body organ, wherein the first and second acquisition members are in apposition to one another along a first longitudinal axis in an open configuration;

adhering tissue from the region within each of the first and second acquisition members; and

compressing the adhered tissue between the first and second acquisition members in a closed configuration.

45. The method of claim 44 further comprising fastening the adhered tissue between the first and second acquisition members with at least one fastener.

46. The method of claim 45 further comprising removing the first and second acquisition members from the hollow body organ.

47. The method of claim 44 further comprising advancing the first and second acquisition members transesophageally into the hollow body organ.

48. The method of claim 44 further comprising reconfiguring the first and second acquisition members from a closed configuration to an open configuration prior to positioning.

49. The method of claim 44 wherein positioning the first acquisition member and the second acquisition member comprises aligning the members adjacent to a lesser curvature.

50. The method of claim 44 wherein adhering tissue comprises drawing tissue into each of the first and second acquisition members via a vacuum force created in an opening in each of the members.

51. The method of claim 44 wherein adhering tissue comprises adhering tissue simultaneously to the first and second acquisition members.

52. The method of claim 44 wherein adhering tissue comprises adhering tissue sequentially to the first and second acquisition members.

53. The method of claim 44 further comprising removing a septum from between the first acquisition member and the second acquisition member prior to compressing the adhered tissue.

54. The method of claim 53 wherein removing the septum comprises translating the septum distally relative to the first and second acquisition members.

55. The method of claim 53 wherein removing the septum comprises translating the septum proximally relative to the first and second acquisition members.

56. The method of claim 55 further comprising collapsing the septum while translating proximally.

57. The method of claim 53 wherein the septum is removed laterally.

58. The method of claim 53 further comprising expanding the septum from a delivery configuration to a deployed configuration prior to adhering tissue.

59. The method of claim 44 wherein compressing the adhered tissue comprises pivoting the first and second acquisition members upon the tissue.

60. The method of claim 44 wherein compressing the adhered tissue comprises translating the first and second acquisition members towards one another.

61. A gastroplasty device, comprising:

a first acquisition member and a second acquisition member in apposition to one another, wherein at least one of the acquisition members is adapted to adhere tissue thereto such that the tissue is positioned between the first and second acquisition members; and

a septum removably positioned between the first and second acquisition members, wherein at least one of the acquisition members is movable relative to the septum between a delivery configuration and a deployment configuration.

62. The gastroplasty device of claim 61 further comprising an elongate body attachable to the acquisition apparatus.

63. The gastroplasty device of claim 62 wherein a longitudinal axis defined by the elongate body is parallel with a longitudinal axis defined by the apparatus.

64. The gastroplasty device of claim 61 wherein each of the first and second acquisition members is adapted to adhere tissue thereto.

65. The gastroplasty device of claim 61 wherein each of the first and second acquisition members is movable relative to the septum between the delivery configuration and deployment configuration.

66. The gastroplasty device of claim 65 wherein each of the first and second acquisition members is pivotally movable relative to the septum.

67. The gastroplasty device of claim 65 wherein each of the first and second acquisition members is movable in a radial direction from one another relative to the septum.

68. The gastroplasty device of claim 65 wherein the first and second acquisition members are movable simultaneously.

69. The gastroplasty device of claim 65 wherein the first and second acquisition members are movable sequentially.

70. The gastroplasty device of claim 65 wherein the first and second acquisition members are movable independently of one another.
71. The gastroplasty device of claim 61 wherein the at least one acquisition member is pivotally movable relative to the septum.
72. The gastroplasty device of claim 61 wherein the at least one acquisition member is movable in a radial direction relative to the septum.
73. The gastroplasty device of claim 61 wherein at least one of the acquisition members has a curved outer surface.
74. The gastroplasty device of claim 61 wherein at least one of the acquisition members defines an atraumatic tip at a distal end thereof.
75. The gastroplasty device of claim 61 wherein the first acquisition member comprises a cartridge assembly containing at least one fastener therein for affixing to the tissue.
76. The gastroplasty device of claim 75 wherein the cartridge assembly is straight along the first acquisition member.
77. The gastroplasty device of claim 75 wherein the cartridge assembly is curved along the first acquisition member.
78. The gastroplasty device of claim 75 wherein the second acquisition member comprises an anvil assembly.
79. The gastroplasty device of claim 61 further comprising a vacuum pump in fluid communication with at least one of the acquisition members.
80. The gastroplasty device of claim 61 wherein the first and second acquisition members each define at least one opening therein which is in fluid communication with a proximal end of the apparatus.

81. The gastroplasty device of claim 80 wherein the first and second acquisition members are adapted to pivot towards one another depending upon a vacuum force applied through the at least one opening.

82. The gastroplasty device of claim 61 wherein at least one of the acquisition members comprises serrations along the acquisition member.

83. The gastroplasty device of claim 61 wherein at least one of the acquisition members comprises elongate fastening members adapted to be passed through the adhered tissue.

84. The gastroplasty device of claim 61 further comprising at least one rotatable member contained within the at least one acquisition member, wherein the rotatable member has an outer surface defining serrations thereon for grasping the tissue within the acquisition member when rotated about a longitudinal axis.

85. The gastroplasty device of claim 61 wherein the septum comprises a first barrier extending longitudinally between the first and second acquisition members.

86. The gastroplasty device of claim 85 wherein the septum comprises a second barrier transverse to the first barrier such that the second barrier is in apposition to the first and second acquisition members.

87. The gastroplasty device of claim 86 wherein the second barrier is planar.

88. The gastroplasty device of claim 86 wherein the second barrier is curved about each of the first and second acquisition members.

89. The gastroplasty device of claim 86 wherein the second barrier extends in apposition along a portion of the first acquisition member and in apposition along a portion of the second acquisition member.

90. The gastroplasty device of claim 86 wherein the second barrier is adjustable in height relative to the first barrier.

91. The gastroplasty device of claim 86 wherein the second barrier is adjustably extendable from the first barrier.
92. The gastroplasty device of claim 86 wherein the first and second barriers are collapsible between a delivery configuration and a deployed configuration.
93. The gastroplasty device of claim 61 wherein a proximal portion of the septum is tapered.
94. The gastroplasty device of claim 61 wherein the septum comprises a ribbed surface such that the septum is configurable from an expanded configuration to a collapsed configuration.
95. The gastroplasty device of claim 61 further comprising a pull-cable attached to the first and second acquisition members for actuating the apparatus between the delivery and deployment configurations.
96. The gastroplasty device of claim 61 further comprising a torque-rod coupled to the first and second acquisition members for actuating the apparatus between the delivery and deployment configurations.
97. The gastroplasty device of claim 61 wherein the first and second acquisition members are hydraulically actuated between the delivery configuration and the deployment configuration.
98. The gastroplasty device of claim 61 wherein the first and second acquisition members are pneumatically actuated between the delivery configuration and the deployment configuration.
99. The gastroplasty device of claim 61 wherein the first and second acquisition members are comprised of a plurality of articulatable links.

100. A method of acquiring tissue from within a hollow body organ, comprising:

positioning a first acquisition member and a second acquisition member adjacent to a region of tissue within the hollow body organ, wherein the first and second acquisition members are in apposition to one another in an open configuration;

adhering tissue from the region within each of the first and second acquisition members;

removing a septum from between the first acquisition member and the second acquisition member; and

compressing the adhered tissue between the first and second acquisition members in a closed configuration.

101. The method of claim 100 further comprising fastening the adhered tissue between the first and second acquisition members with at least one fastener.

102. The method of claim 101 further comprising removing the first and second acquisition members from the hollow body organ.

103. The method of claim 101 further comprising advancing the first and second acquisition members transesophageally into the hollow body organ.

104. The method of claim 100 further comprising reconfiguring the first and second acquisition members from a closed configuration to an open configuration prior to positioning.

105. The method of claim 100 wherein positioning the first acquisition member and the second acquisition member comprises aligning the members adjacent to a lesser curvature of a stomach.

106. The method of claim 100 wherein positioning the first acquisition member and the second acquisition member comprises aligning the members adjacent to a greater curvature of a stomach.

107. The method of claim 100 wherein positioning the first acquisition member and the second acquisition member comprises aligning the members at a position located in between a lesser and greater curvature of a stomach.

108. The method of claim 100 wherein adhering tissue comprises drawing tissue into each of the first and second acquisition members via a vacuum force created in an opening in each of the members.

109. The method of claim 100 wherein adhering tissue comprises adhering tissue simultaneously to the first and second acquisition members.

110. The method of claim 100 wherein adhering tissue comprises adhering tissue sequentially to the first and second acquisition members.

111. The method of claim 100 wherein removing the septum comprises translating the septum distally relative to the first and second acquisition members.

112. The method of claim 100 wherein removing the septum comprises translating the septum proximally relative to the first and second acquisition members.

113. The method of claim 112 further comprising collapsing the septum while translating proximally.

114. The method of claim 100 wherein the septum is removed laterally.

115. The method of claim 100 further comprising expanding the septum from a delivery configuration to a deployed configuration prior to adhering tissue.

116. The method of claim 100 wherein compressing the adhered tissue comprises pivoting the first and second acquisition members upon the tissue.

117. The method of claim 100 wherein compressing the adhered tissue comprises translating the first and second acquisition members towards one another.